Title (en)

COPPER ALLOY, PLASTICALLY WORKED COPPER ALLOY MATERIAL, COMPONENT FOR ELECTRONIC/ELECTRICAL EQUIPMENT, TERMINAL, AND HEAT DISSIPATION SUBSTRATE

Title (de)

KUPFERLEGIERUNG, PLASTISCH BEARBEITETES KUPFERLEGIERUNGSMATERIAL, KOMPONENTE FÜR ELEKTRONISCHE/ELEKTRISCHE GERÄTE, ANSCHLUSS UND WÄRMEABLEITUNGSSUBSTRAT

Title (fr)

ALLIAGE DE CUIVRE, MATÉRIAU EN ALLIAGE DE CUIVRE TRAVAILLÉ PLASTIQUEMENT, COMPOSANT POUR APPAREIL ÉLECTRONIQUE OU ÉLECTRIQUE, BORNE ET SUBSTRAT DE DISSIPATION DE CHALEUR

Publication

EP 4174200 A1 20230503 (EN)

Application

EP 21834386 A 20210630

Priority

- JP 2020112695 A 20200630
- JP 2021024769 W 20210630

Abstract (en)

This copper alloy contains greater than 10 mass ppm and 100 mass ppm or less of Mg, with a balance being Cu and inevitable impurities, in which among the inevitable impurities, a S amount is 10 mass ppm or less, a P amount is 10 mass ppm or less, a Se amount is 5 mass ppm or less, a Te amount is 5 mass ppm or less, an Sb amount is 5 mass ppm or less, a Bi amount is 5 mass ppm or less, an As amount is 5 mass ppm or less, a total amount of S, P, Se, Te, Sb, Bi, and As is 30 mass ppm or less, a mass ratio [Mg]/[S + P + Se + Te + Sb + Bi + As] is 0.6 to 50, an electrical conductivity is 97% IACS or greater, a half-softening temperature is 200°C or higher, a residual stress ratio RS_G at 180°C for 30 hours in a direction parallel to a rolling direction is 20% or greater, and a ratio RS_G/RS_B of the residual stress ratio RS_G to a residual stress ratio RS_B at 180°C for 30 hours in a direction transverse to the rolling direction is greater than 1.0.

IPC 8 full level

C22C 9/00 (2006.01); **C22F 1/00** (2006.01); **C22F 1/08** (2006.01); **H01B 1/02** (2006.01); **H01B 5/02** (2006.01)

CPC (source: EP KR US)

C09K 5/14 (2013.01 - US); **C22C 9/00** (2013.01 - EP KR US); **C22F 1/08** (2013.01 - EP KR); **H01B 1/02** (2013.01 - KR); **H01B 1/026** (2013.01 - EP US); **H01B 5/02** (2013.01 - KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

EP 4174200 A1 20230503; CN 115917023 A 20230404; CN 115917023 B 20240412; JP 2022022629 A 20220207; JP 7136157 B2 20220913; KR 20230030579 A 20230306; TW 202212583 A 20220401; US 2023243019 A1 20230803; WO 2022004794 A1 20220106

DOCDB simple family (application)

EP 21834386 A 20210630; CN 202180045210 A 20210630; JP 2020112695 A 20200630; JP 2021024769 W 20210630; KR 20227044802 A 20210630; TW 110124053 A 20210630; US 202118003375 A 20210630